

B' assembled, a guide means is present which brings the ball joint together in a selective manner, and furthermore that in extreme-end positions of the joint, which do not correspond to normal operations, a defined abutment is provided for safety reasons. By designing the junction housing accordingly in the internal area with corresponding surrounding abutment surfaces this can be established. Care must be taken that especially the tumbler socket which in some cases bears the bushing will first engage the abutment in the extreme position and only then contact the ball of the joint at a second abutment surface. This assures, especially in the uninstalled condition, that contact in the extreme position is cushioned. This kind of abutment definition is especially suitable for the present resilient ball joint bearing according to the invention, but it can also be used to advantage in other universal joints without resilient ball joint bearing.

Page ~~5~~, first full paragraph, amend as follows:

B² Other embodiments of cross joints are also suitable for universal joint systems. If, for example, especially great ease of movement and uniform motion are required, the double joint is advantageously made with a universal joint, also called a constant velocity joint, especially of the constant speed fixed link type. Between the two joints, which are joined together by

β₂
a housing, the ball joint is again arranged with the resilient mounting, so that the shaft extremities are mounted for flexural movement through the two joints. Constant velocity joints are manufactured as "Löbro-Gelenke" by Löhr & Bromkamp GmbH, DE 6050 Offenbach.

sub. c1
B3
Page 6, after line 5, insert ~~Fig. 3a shows schematically a waiver of the bearing system.~~

Page 7, after line 8, insert ~~Fig. 8b shows a detailed Fig.~~

sub. c2
B4
~~in section and enlarged.--.~~

Page 8, first full paragraph amend as follows:

sub. c1
β₅
A steering shaft double-cross universal joint according to the invention is represented in Figures 1 and 2. The joint consists of a tubular dual fork coupling case 8 in which two joint crosses 9 are respectively mounted for movement. The shaft ends 1 and 2 are jointed on one another by means of the forks 4 and 6 which are journaled on the joint crosses 9, and to the socket 7 by the ball neck 10 and the balls 5. Bellows can protect the joint against dirt.

Page 8, third full paragraph amend as follows:

B6
In Figure 2 there is shown in cross section a joint rotated 90 degrees, in which the forks 4 and 6 are represented at the shaft ends 1 and 2. The latter can be movably inserted, as mentioned, in the crosses 9 on the casing 8, which can be tubular, for example. In the central inner area of the casing the end abutments 13 and 14 are represented, which are in the form of annular raised portions and are helpful until the joint is assembled, and serve simultaneously as safety abutments in extreme terminal positions of the joint. The abutment surfaces 13 and 14 are configured such that the socket 7 when in the extreme position with respect to the ball 5 will first make movement-limiting contact with the abutment 13.

Page 9, third full paragraph amend as follows:

B7
In Figure 3 is shown how the socket 7 can be held on the fork with bias as a tumbler socket 7 by springs 31. On account of the great bias force that is to be applied and the small amount of space available, plate springs are preferred. They furthermore are less expensive. Another appropriate spring mounting is possible by the use of rubber-elastic 31P (Figure 3a) pads which can be in annular form, for example, held between metal disks 31D. This can be done if necessary in a layered configuration.

Page 11, first full paragraph amend as follows:

B8
Additional possibilities for the bearing are represented in Figure 4. In the upper half of the figure a rim 32.2 clutches the fork 6 on the side facing away from the ball of a projection 42. The springs 31 are held between the front side of the projection 42 and a rim of the bushing 11 forming an annular chamber 34.

Page 12, second full paragraph amend as follows:

B8
Sub 64> The guide 32 is preferably injection molded directly into the ball 5. The variant in Figures 9b and 9a shows in longitudinal and cross section an additional preferred possibility for a damping compensation of free play in the unbiased state. The plastic sliding guide 37 is provided in its outer wall area with a plastic spring 39, which permits sliding without free play under bias V. The spring 39 is preferably made in one piece with the plastic guide 37, the spring being preferably slotted 40 so that it can breathe radially and being in contact with the inside surface of the tumbler guide 30 in a wear and tolerance equalizing manner. In Figure 10 the same plastic sliding guide as in Figure 9 is shown in the installed state. The tolerance gaps A, B, which the spring spans with respect to the tumbler guide 30, are shown schematically.